

WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

GM 531-12

**Nabors 573**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 12/26/2014  
Job Date: 12/10/2014

Submitted by: Aaron Katz – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 300721	Ship To #: 3560604	Quote #:	Sales Order #: 0901913588
Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		Customer Rep: BEAUDE OAKS	
Well Name: GM	Well #: 531-12	API/UWI #: 05-045-22463-00	
Field: GRAND VALLEY	City (SAP): PARACHUTE	County/Parish: GARFIELD	State: COLORADO
Legal Description: NE NW-12-7S-96W-1177FNL-1906FWL			
Contractor: NABORS DRLG		Rig/Platform Name/Num: NABORS 573	
Job BOM: 7521			
Well Type: DIRECTIONAL GAS			
Sales Person: HALAMERICA\HB50180		Srvc Supervisor: Craig Kukus	

### Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	1526ft		Job Depth TVD 1526
Water Depth			Wk Ht Above Floor 4 FT
Perforation Depth (MD)	From		To

### Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	9.001	32.3	8 RD	H-40	0	1526		0
Open Hole Section			13.5				0	1538		0

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625	1		1526	Top Plug	9.625	1	HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625	1			SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625	1	HES
Stage Tool	9.625				Centralizers	9.625		HES

### Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty

### Fluid Data

Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Fresh Water	Fresh Water	20	bbl	8.34			4		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	VariCem GJ5	VARICEM (TM) CEMENT	230	sack	12.3	2.45		8	14.17	

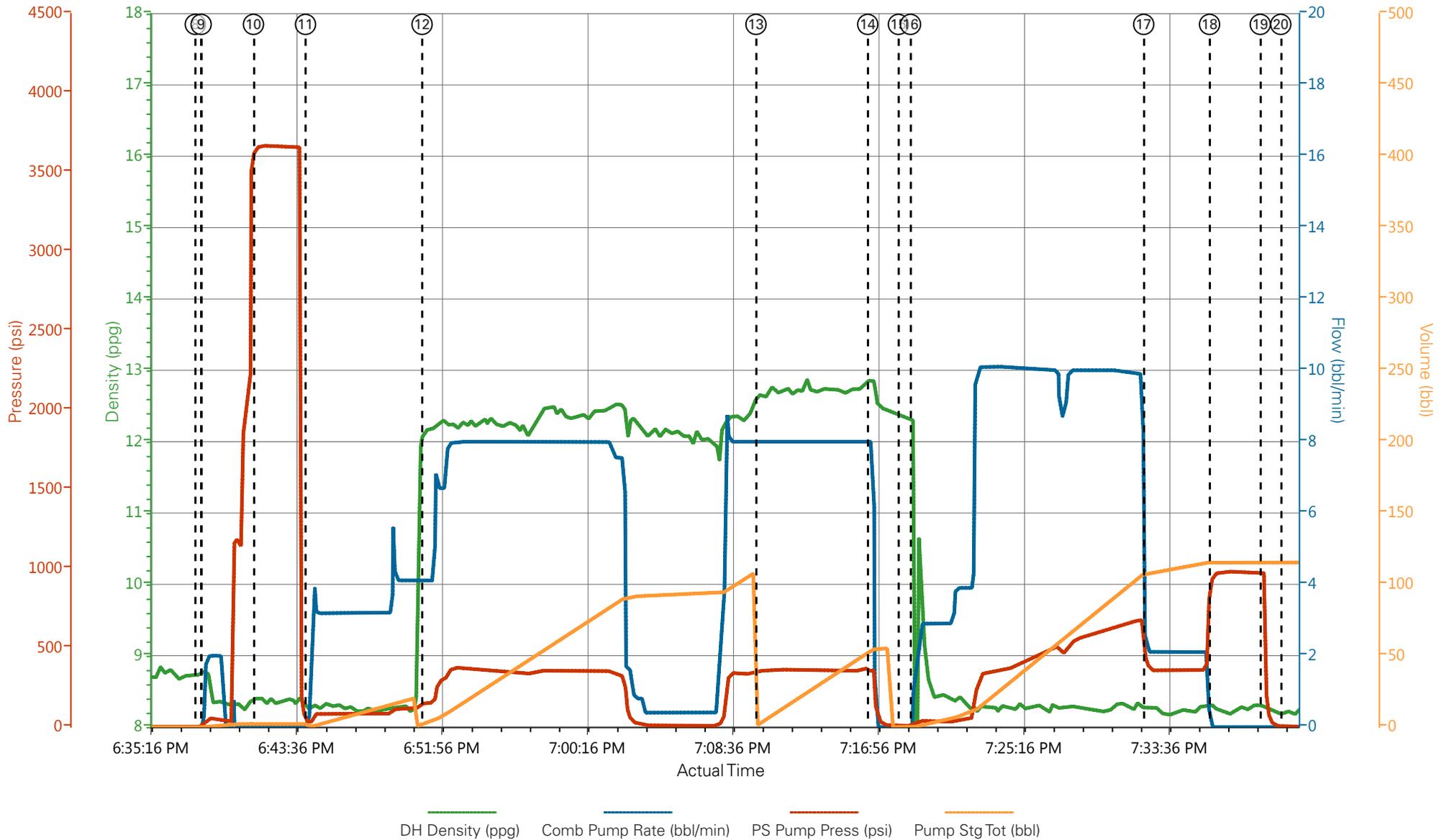
14.10 Gal		FRESH WATER							
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/mi n</b>	<b>Total Mix Fluid Gal</b>
3	VariCem GJ5	VARICEM (TM) CEMENT	160	sack	12.8	2.18		8	12.11
12.05 Gal		FRESH WATER							
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/mi n</b>	<b>Total Mix Fluid Gal</b>
4	Fresh Water Displacement	Fresh Water Displacement	116.5	bbl	8.34			10/2	
<b>Cement Left In Pipe</b>	<b>Amount</b>	46 ft			<b>Reason</b>			Shoe Joint	
<b>Mix Water:</b>	pH ##	<b>Mix Water Chloride:</b> ## ppm			<b>Mix Water Temperature:</b> 58 °F °C				
<b>Cement Temperature:</b>	## °F °C	<b>Plug Displaced by:</b> 8.33 lb/gal kg/m3 XXXX			<b>Disp. Temperature:</b> ## °F °C				
<b>Plug Bumped?</b>	Yes	<b>Bump Pressure:</b> 979 psi MPa			<b>Floats Held?</b> Yes				
<b>Cement Returns:</b>	40 bbl m3	<b>Returns Density:</b> ## lb/gal kg/m3			<b>Returns Temperature:</b> ## °F °C				
<b>Comment</b>									

### 3.1 Job Event Log

Type	Seq No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comment
Event	1	Call Out	12/10/2014	11:00:00	USER					CREW CALL OUT
Event	2	Depart from Service Center or Other Site	12/10/2014	13:30:00	USER					SAFETY MEETING DEPARTING SERVICE CENTER ALL HES CREW PRESENT
Event	3	Arrive At Loc	12/10/2014	15:00:00	USER					ARRIVE ON LOC EARLY / RIG RUNNING CSG / HES EQUIP ON LOC 1 EA CMT PUMP UNIT 2 EA 660 BULK UNITS 1 EA SERVICE PICK UP
Event	4	Assessment Of Location Safety Meeting	12/10/2014	15:30:00	USER					ASSESSMENT WALK THRU OF LOC ALL HES PRESENT
Event	5	Pre-Rig Up Safety Meeting	12/10/2014	17:00:00	USER					PRE-RIG UP SAFETY MEETING ALL HES CREW PRESENT
Event	6	Rig-Up Equipment	12/10/2014	17:10:00	USER					RIG UP IRON TO STAND PIPE / RIG UP SUCTION HOSES AND BULK EQUIPMENT
Event	7	Pre-Job Safety Meeting	12/10/2014	18:00:00	USER	8.71	3.30	9.00	0.0	ALL RIG PERSONEL PRESENT AND HES CREW FOR PRE-JOB SAFETY MEETING / RIG BLEW DOWNS LINES WAITING FOR SUCK TRUCKS / WATER TRUCKS ARRIVE - STAB HEAD WING UP BAILS
Event	8	Start Job	12/10/2014	18:37:58	COM6	8.74	0.00	1.00	0.0	START JOB: TD 1538 FT TP 1526.38 FT SJT 46.29 FT OH 13.5 IN WF/WT 9.5# CSG 9 5/8 IN H-49 32.3#
Event	9	Prime Pumps	12/10/2014	18:38:18	USER	8.78	1.20	15.00	2.0	PRIME LINE WITH FRESH WATER
Event	10	Test Lines	12/10/2014	18:41:18	COM6	8.40	0.00	3655.00	0.1	PRESSURE TEST LINES 5 TH GEAR STALL OUT AT 1140 PSI TEST TO 3600 PSI
Event	11	Pump Spacer 1	12/10/2014	18:44:17	COM6	8.28	0.00	26.00	20	PUMP 20 BBLs H2O SPACER AHEAD / HAVE RETURNS
Event	12	Pump Lead Cement	12/10/2014	18:50:58	COM6	12.20	4.10	153.00	100.5	PUMP 230 SKS LEAD CEMENT AT 12.3 PPG 2.45 Y 14.17 GAL/SKS RETURNS GOOD AND CEMENT DIP GOOD / HAD TO SLOW RATE HAD FLOW LINE FROM 660 UNIT NEARLY CAME APART /

										REMOVED HOSE AND HOOKED TO HEAD GOT BACK INTO MIXING
Event	13	Pump Tail Cement	12/10/2014	19:10:05	COM6	12.64	8.00	353.00	62	PUMP 160 SKS TAIL CEMENT AT 12.8 PPG 2.18 Y 12.11 GAL/SKS RETURNS GOOD CEMENT DIP GOOD
Event	14	Shutdown	12/10/2014	19:16:29	USER	12.85	8.00	359.00	184.5	SHUT DOWN END CEMENT / READY TUB TO WASH UP ON TOP
Event	15	Drop Top Plug	12/10/2014	19:18:15	COM6	12.34	0.00	8.00	0.0	DROP TOP PLUG / PLUG AWAY
Event	16	Pump Displacement	12/10/2014	19:18:56	COM6	12.26	1.70	12.00	106	PUMP H2O DISPLACEMENT
Event	17	Slow Rate	12/10/2014	19:32:18	USER	8.27	2.10	405.00	107.9	SLOW RATE LAST 10 BBLS TO 2 BBLS A MIN
Event	18	Bump Plug	12/10/2014	19:36:04	COM6	8.30	0.00	944.00	116.5	PLUG LANDED AT 360 PSI / BUMP TO 979 PSI
Event	19	Check Floats	12/10/2014	19:38:58	USER	8.30	0.00	974.00	116.5	CHECK FLOATS / GOT BACK 1/2 BBL TO TANKS
Event	20	End Job	12/10/2014	19:40:09	COM6	8.21	0.00	2.00	301	END JOB / HAD RETURNS THRU OUT THE JOB GOT 40 BBLS CEMENT TO SURFACE
Event	21	Pre-Rig Down Safety Meeting	12/10/2014	19:45:00	USER	8.35	5.40	4.00	0	ALL HES CREW PRE-SENT
Event	22	Rig-Down Equipment	12/10/2014	19:50:00	USER					RIG DOWN FLOOR WASH UP PUMP AND RIG DOWN EQUIPMENT
Event	23	Safety Meeting - Departing Location	12/10/2014	20:40:00	USER					SAFETY MEETING DEPARTING LOC ALL HES CREW PRESENT
Event	24	Comment	12/10/2014	20:45:00	USER					THANK YOU FOR USING HALLIBURTON CEMENTING SERVICES AND THE CREW OF CRAIG KUKUS

WPX ENERGY ROCKY MOUNTAIN GM 531-12 CEMENT SURFACE CSG JOB NABORS 573



- ① Call Out
- ② Depart from Service Center or Other Site
- ③ Arrive At Loc
- ④ Assessment Of Location Safety Meeting
- ⑤ Pre-Rig Up Safety Meeting
- ⑥ Rig-Up Equipment
- ⑦ Pre-Job Safety Meeting
- ⑧ Start Job
- ⑨ Prime Pumps
- ⑩ Test Lines
- ⑪ Pump Spacer 1
- ⑫ Pump Lead Cement
- ⑬ Pump Tail Cement
- ⑭ Shutdown
- ⑮ Drop Top Plug
- ⑯ Pump Displacement
- ⑰ Slow Rate
- ⑱ Bump Plug
- ⑲ Check Floats
- ⑳ End Job
- ㉑ Pre-Rig Down Safety Meeting
- ㉒ Rig-Down Equipment
- ㉓ Safety Meeting - Departing Location
- ㉔ Comment

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Created: 2014-12-10 16:00:01, Version: 3.0.121

Edit

Customer: WPX ENERGY ROCKY MOUNTAIN LLC-EBUS

Job Date: 12/10/2014 5:44:34 PM

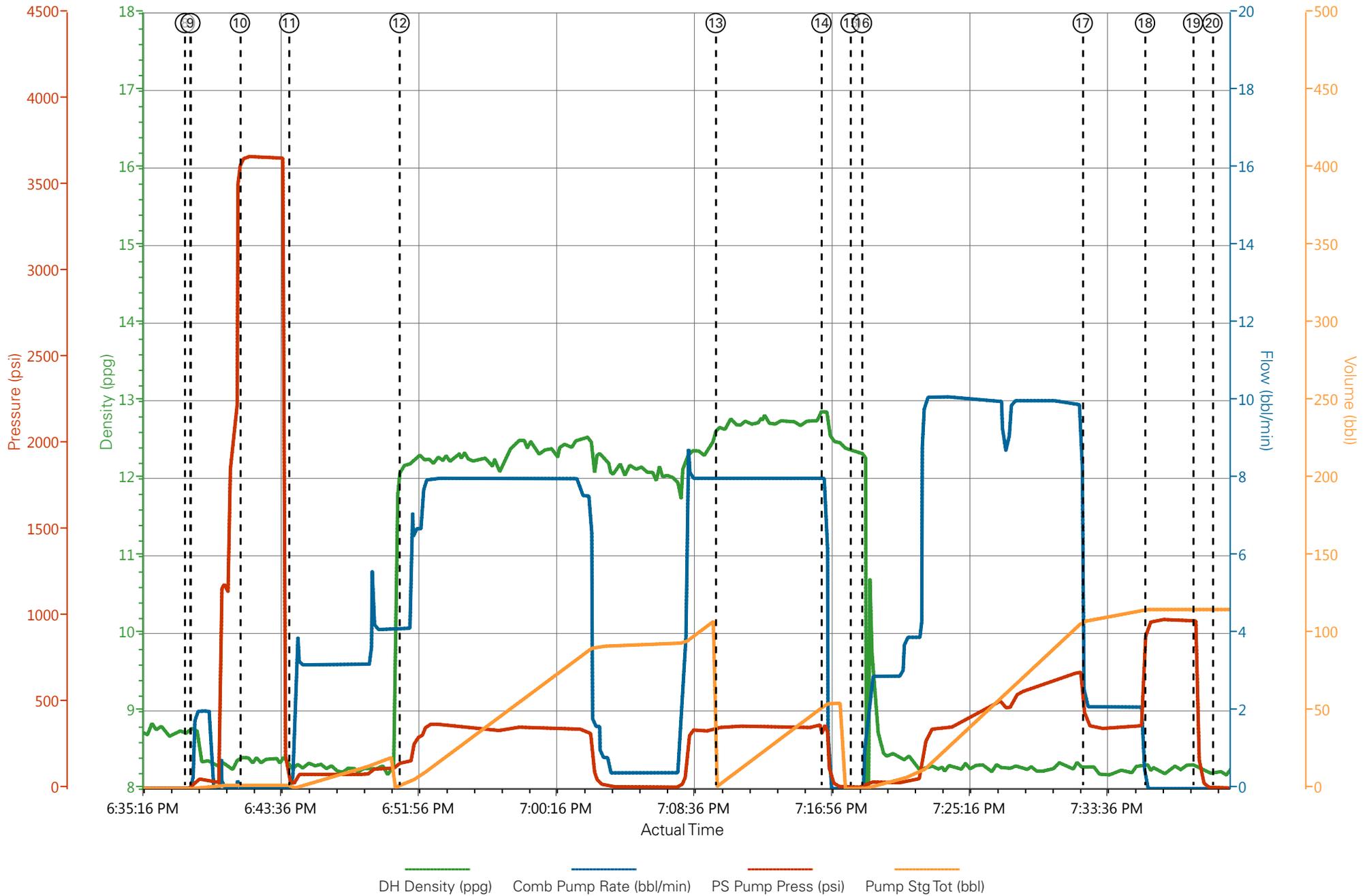
Well: 531-12

Representative: CRAIG KUKUS

Sales Order #: 0901913588

E-6 / OPERATOR: ROGER LAULAINEN

WPX ENERGY ROCKY MOUNTAIN GM 531-12 CEMENT SURFACE CSG JOB NABORS 573



DH Density (ppg) Comb Pump Rate (bbl/min) PS Pump Press (psi) Pump Stg Tot (bbl)

# HALLIBURTON

## Water Analysis Report

Company: WPX ENERGY

Date: 12/10/2014

Submitted by: CRAIG KUKUS

Date Rec.: 12/10/2014

Attention: \_\_\_\_\_

S.O.# 901913588

Lease GM

Job Type: SURFACE

Well # 531-12

Specific Gravity	<i>MAX</i>	<b>0</b>
pH	<i>8</i>	<b>8</b>
Potassium (K)	<i>5000</i>	<b>400</b> Mg / L
HARDNESS	<i>500</i>	<b>425</b> Mg / L
Iron (FE2)	<i>300</i>	<b>0</b> Mg / L
Chlorides (Cl)	<i>3000</i>	<b>0</b> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200</b> Mg / L
Chlorine (Cl <sub>2</sub> )		<b>0</b> Mg / L
Temp	<i>40-80</i>	<b>58</b> Deg
Total Dissolved Solids		<b>490</b> Mg / L

Respectfully: CRAIG KUKUS

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or

<b>Sales Order #:</b> 0901913588	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 12/10/2014
<b>Customer:</b> WPX ENERGY ROCKY MOUNTAIN LLC-EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> BEAUDE OAKS		<b>API / UWI: (leave blank if unknown)</b> 05-045-22463-00
<b>Well Name:</b> GM		<b>Well Number:</b> 0080641164
<b>Well Type:</b> DIRECTIONAL GAS	<b>Well Country:</b> USA	
<b>H2S Present:</b> No	<b>Well State:</b> COLORADO	<b>Well County:</b> GARFIELD

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

### CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	12/10/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX19742
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	BEAUDE OAKS
HSE	Was our HSE performance satisfactory? Circle Y or N	Yes
Equipment	Were you satisfied with our Equipment? Circle Y or N	Yes
Personnel	Were you satisfied with our people? Circle Y or N	Yes
Customer Comment	Customer's Comment	

<b>CUSTOMER SIGNATURE</b>
---------------------------

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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	12/10/2014
The date the survey was conducted	

Cementing KPI Survey	
<b>Type of Job</b>	0
Select the type of job. (Cementing or Non-Cementing)	
<b>Select the Maximum Deviation range for this Job</b>	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
<b>Total Operating Time (hours)</b>	2.5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
<b>HSE Incident, Accident, Injury</b>	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
<b>Was the job purpose achieved?</b>	Yes
Was the job delivered correctly as per customer agreed design?	
<b>Operating Hours (Pumping Hours)</b>	1
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Customer Non-Productive Rig Time (hrs)</b>	0
Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
<b>Type of Rig Classification Job Was Performed</b>	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
<b>Number Of JSAs Performed</b>	6
Number Of Jsas Performed	
<b>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes

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Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Top
<b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b> Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	99
<b>Was Automated Density Control Used?</b> Was Automated Density Control (ADC) Used ?	Yes
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b> Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	99
<b>Nbr of Remedial Sqz Jobs Rqd - Competition</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
<b>Nbr of Remedial Plug Jobs Rqd - HES</b> Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0